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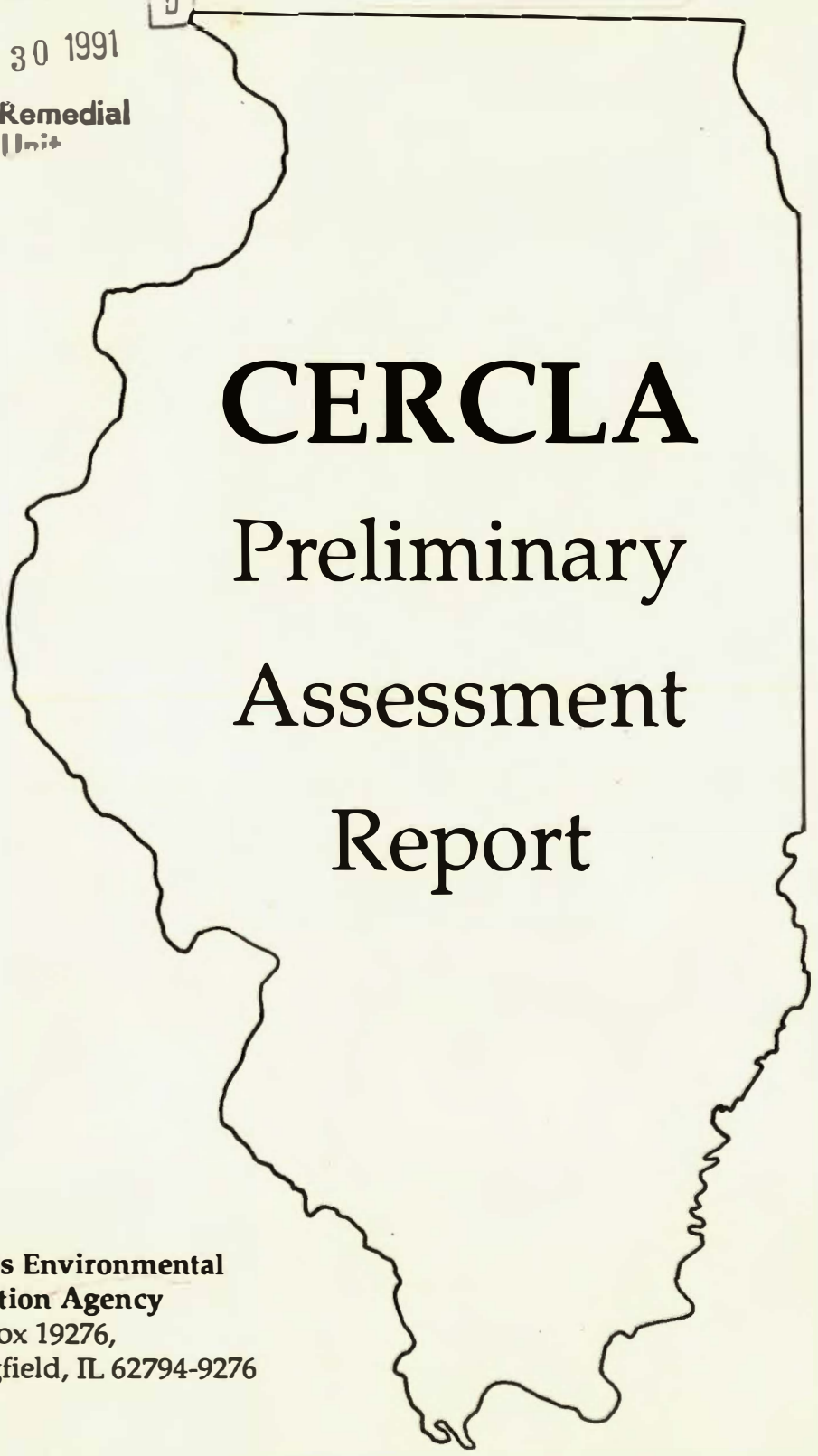
Lil10900003-McHenry
Techalloy
ILD005178975
SF/HRS



CERCLA

Preliminary Assessment Report

Illinois Environmental Protection Agency
P.O. Box 19276,
Springfield, IL 62794-9276

Confidential Material May be Enclosed

EXECUTIVE SUMMARY

1110900003 - McHenry Co.
Union/Techalloy Company

On September 24, 1990, the Illinois Environmental Protection Agency requested discovery action on the Techalloy site. This action was taken due to the discovery of solvent contamination in the aquifer used as the drinking water supply for the village of Union, Illinois.

Techalloy is a steel wire drawing facility and has operated since 1960. The plant is located on 40 acres on the northwest corner of Jefferson and Olson Roads just east of Union, Illinois (McHenry County, Township 44 North, Range 6 East, Section 4). Techalloy employs 118 people in three shifts and processes stainless steel wire for use by industry. The property was purchased from Clarence O'Cock in 1960, at which time Agency records indicate it was undeveloped. Techalloy subsequently built the structures which currently comprise the facility.

Presently, Techalloy processes steel and nickel alloy rod. Unprocessed, hot-rolled rod is annealed and drawn into wires of varying strengths and diameters through various sizes of dies. A variety of coatings and cleaners are presently utilized in the production processes, including acidic and caustic cleaners, coating solutions, dyes, and rinses.

At this time, Techalloy is undergoing closure of two regulated process units. A 3008 h recommendation was submitted to the USEPA by the IEPA Permits Section which has not yet been responded to. Remediation of the regulated units will not address the sources of concern described in this assessment.

In the course of conducting an environmental assessment in January, 1990, Techalloy installed four groundwater monitoring wells. It was determined that the groundwater under the site flows in the northwesterly direction. It was also found that the groundwater near the facility buildings was contaminated with low levels of solvents, including 1,1,1-trichloroethane, trichloroethene, and perchloroethene. These solvents were previously used by Techalloy to degrease wire. The suspected source of the contamination is a Solid Waste Management Unit (SWMU) described as a cement pad on which solvents were dumped for "evaporation" until 1978.

Techalloy contacted the IEPA Immediate Removal Unit and requested participation in the Voluntary Cleanup Program. An Agency project manager has been working with the company to determine the extent of the contamination. However, Techalloy has become increasingly uncooperative in providing

information on the results of their investigation or allowing the IEPA to observe and participate in their sampling.

From the early 1960's until approximately 1980, Techalloy treated their spent pickle liquor by neutralizing it with ammonia, then filtering it through a limestone filled in-ground steel lined holding bed. The liquid then traveled through a drainage tile to an unlined dry-bed pond (i.e. a surface impoundment) for evaporation. The spent pickle liquor consisted of dilute hydrofluoric, sulfuric, muriatic, and nitric acids. The drainage tile was closed off in 1969 or 1970, but the limestone bed was utilized along with a clarifier until 1980.

Since 1968 or 1969, Techalloy has intermittently operated a copper coating process in which wire was first washed in a bath of nickel sulfate, then rinsed over an in-ground tank. The wire is then dipped into a cyanide bath, and rinsed over the same in-ground tank. Until 1978, the liquid from the in-ground tank was discharged onto the ground behind the facility.
During the period of March 26 to April 4, 1990, one deep and five shallow monitoring wells were installed in the northwest corner of the facility. The deep well was constructed with a stainless steel casing and screen and had a depth of 90 feet. One shallow well was constructed of stainless steel materials and had a depth of 37.5 feet. The remaining four shallow wells were constructed with galvanized steel casings and stainless steel screens at a depth of 25 feet.

The results of groundwater sampling clearly indicates that the VOC groundwater contamination has migrated off-site. Monitoring well HRB, which is located at least 2000 feet off-site, has approximately 3700 ppb of 1,1,2 trichloroethane. Monitoring well MW-7 at the northwest corner of the facility boundary has 15,000 ppb of 1,1,1-trichloroethane. Private wells in the area have also been impacted, but as of the latest sampling event, the levels appear to be below existing MCLs. However, the sampling procedures used have not been documented and improper sampling procedures may result in artificially low levels being reported.

In 1987, Union's Public Water Supply (PWS) Well #3 was taken out of service due to excessive levels of the following inorganic parameters: ammonia, chlorides, sulfates, sodium, and potassium. A study of the Union area was conducted by Dames and Moore for California Chemical Company in 1990 after contamination of Union Well #3 was discovered. The investigation indicated that the degradation of ground water quality at Union Well #3 did not begin to occur until after 1976. In 1977, the only constituent to begin showing a perceptible upward trend in concentration was chloride. During a period from 1978 to 1982, other inorganic

constituents, including sodium, potassium, and sulfates began showing upward trends in concentration at the well. It was not surprising to see chloride arriving a Union Well #3 prior to other constituents, since chloride in the ground water is not as readily affected by adsorption onto the aquifer material through which the water flows as other less conservative constituents.

Soils encountered during borings conducted across the village of Union indicate a fairly consistent subsurface lithology. The boring logs typically indicate a 2-5 feet thick silty sand topsoil overlying a thick (at least 70 feet) fine to coarse sand, containing occasional gravel. In the monitoring well borings which extended to a sufficient depth (W-1, W-2, and W-3), clay and silt lenses ranging from less than a foot to over five feet thick were encountered. The continuity of these layers across the investigation area is unknown, but such layers will be much less permeable than either the overlying or underlying fine to coarse sands. Such low permeability layers or lenses will act to minimize downward migration of possible contaminants; although, if the lateral extent of such layers or lenses is limited, the effect will be localized.

The thick sand unit was found to be typically well-graded (indicating a wide range of sand grain sizes) within the upper 30 feet, becoming more poorly-graded (narrower range of grain sizes) with depth in some borings. Occasional fine to coarse gravel was found throughout the sand unit, but appeared to be somewhat more prevalent in the upper, more well-graded sands. Ground water was typically encountered at a depth of 7 to 9 feet below the ground surface while drilling, and generally stabilized at a depth of 5 to 7 feet after several days.

Based on water level elevation contours generated from the water level measurements in the monitoring wells, the groundwater flow direction within the sand aquifer appears to be towards the north northwest.

Geologically, the village of Union lies at the intersection of three surface deposit units: northeast section-outwash deposit with sand and gravel; south section - glacial till of unsorted ice-deposited debris composed of a matrix of silt, clay, and sand in which pebbles, cobbles, and sometimes large boulders are interbedded; and northwest section - outwash deposit with sand and pea gravel (Hackett and McComas, 1989). Illinois Water Survey area well logs indicates that the dolomite bedrock was generally encountered at depths ranging from approximately 110 to 130 feet below the ground surface. An occasional thin shale deposit was encountered above the dolomite bedrock. Based on these well logs, surface deposits in the area generally consist of sand and gravel overlying a clay layer. Most of the wells extend into the dolomite

bedrock. Only a few of the well logs indicate that the sand and gravel layer extends directly to the dolomite bedrock.

The aquifer of concern is the Maquoketa shale and dolomite of the Ordovician system. This system is continuous with the Pleistocene system which consists of gravels and tills. No contiguous confining layers are known to exist and thus the aquifer is considered to extend from the ground surface to a depth of approximately 250 feet.

The drinking water for Union is supplied by two community drinking water wells located (b) (9) [redacted]. The main well (#4) was recently redrilled to 760 feet due to inadequate supply at 215 feet. Well #2 is reported to be active and is screened in dolomite at a depth of 192 ft.

Well #3 was completed in March, 1962 to a depth of 80 feet below ground surface. The well has a 12-inch diameter wrought iron casing from the surface to a depth of 60 feet, followed by 20 feet of 12-inch #90 slot stainless steel screen (Woller and Sanderson, 1976). This well was taken out of service in 1987 and is reported to be a backup well. The connections between this well and the Union water supply system are believed to be intact with only a valve preventing its use. The well is reported to be occasionally used to refill tanks for fire protection.

	# wells		
distance	private	municipal	population
0-1/4 mile	6	0	148
1/4-1/2 mile	15	1	200
1/2-1 mile	17	2	470
1-2 miles	100	0	291
2-3 miles	220	0	641
3-4 miles	300	0	1324
Total	658	3	3074

The nearest surface water is the south branch of the Kishwaukee River located approximately 1/2 mile to the northeast and which flows in a northwesterly direction. No obvious surface water routes to the south branch could be found. Dry, grassy ditches could be seen bordering the roads around the facility, but no sign of adverse impact or direct connection to the plant were observed.

Access to the site is restricted by a chain link fence surrounding the facility. There are two residences adjacent to the facility to the east and southeast. A residential area also exists approximately 600 feet to the west across a field owned by Techalloy. A farm is located (b) (9) [redacted]

(b) (9) [redacted]. An elementary school is located approximately 200 feet to the west of the property boundary and 1200 feet from the actual facility.

Due to the high levels of chlorinated solvents and inorganics in the drinking water supply and the number of residents suspected to be impacted, the author recommends that the Region V office of the USEPA assign a "high" priority rating to this site and advance this facility to the Screening Site Inspection Stage of the Pre-Remedial process.

Wastes Generated include:

Hazardous

Spent Acids (Pickle Liquor) (D002, D007) - This waste is generated from spent pickling baths that remove scale from wire. Approximately 3,000 gallons/1-3 times a month are generated and manifested to Envirite in Harvey, IL for treatment. The waste is removed by tank truck directly form the process.

Pickling Rinse Waters (D002, D007) - This waste is generated from rinsing the wire off between acid baths (tanks are located beneath acid baths). Approximately 5,000 gallons/1-3 times a month are generated and manifested to clean Harbors of Chicago, Inc. in Chicago, IL for treatment. The waste is removed by tank truck directly from the two tanks (10,500 and 16,500 gallons).

ADC Sludge (D002, D007) - This waste is generated from cleaning the rinsate tanks. Approximately 605 gallons/2 months (varies) are generated and manifested to Clean Harbors of Chicago, Inc. in Chicago, IL for treatment. The waste is accumulated in drums.

Used Plating Filters (F008, D003) - This waste is generated from changing the filters in the plating tanks. Approximately 110 gallons/year are generated and manifested to Cyanokem in Detroit, MI for treatment and disposal. The filters are accumulated in drums.

Non-Hazardous

SP-6 Sludge - This waste is generated from cleaning the tank of soap coating for drawing wire. Approximately 165 gallons/2-3 years are generated and manifested to Clean Harbors of Chicago, Inc. in Chicago, IL for treatment. The waste is accumulated in drums.

Waste Oils (high viscosity) - This waste is generated from drawing wires that require high viscosity oils. Approximately 2585 gallons/year are generated and manifested to Clean Harbors of Braintree, Inc. in Braintree, MA for incineration. The waste is accumulated in drums.

Waste Oils (water soluble) - This waste is generate from cooling dies in machines. Approximately 275 gallons/year are generated and manifested to Clean Harbors, of Chicago, Inc. of Chicago, IL for treatment. The waste is generated in drums.

Waste Oils (crankcase) - This waste is generated from vehicle maintenance of forklifts and machinery. Approximately 1430 gallons/year are generated and manifested to America Chemical Service in Griffith, IN for fuel blending. The waste is accumulated in drums and currently no waste is on-site.

Used Filters - This waste is generated from coating wire with Molybdenum DiSulfide. Rates of generation vary and the filters are being disposed of with the general refuse.

Hazardous Waste Units

Tank Treatment

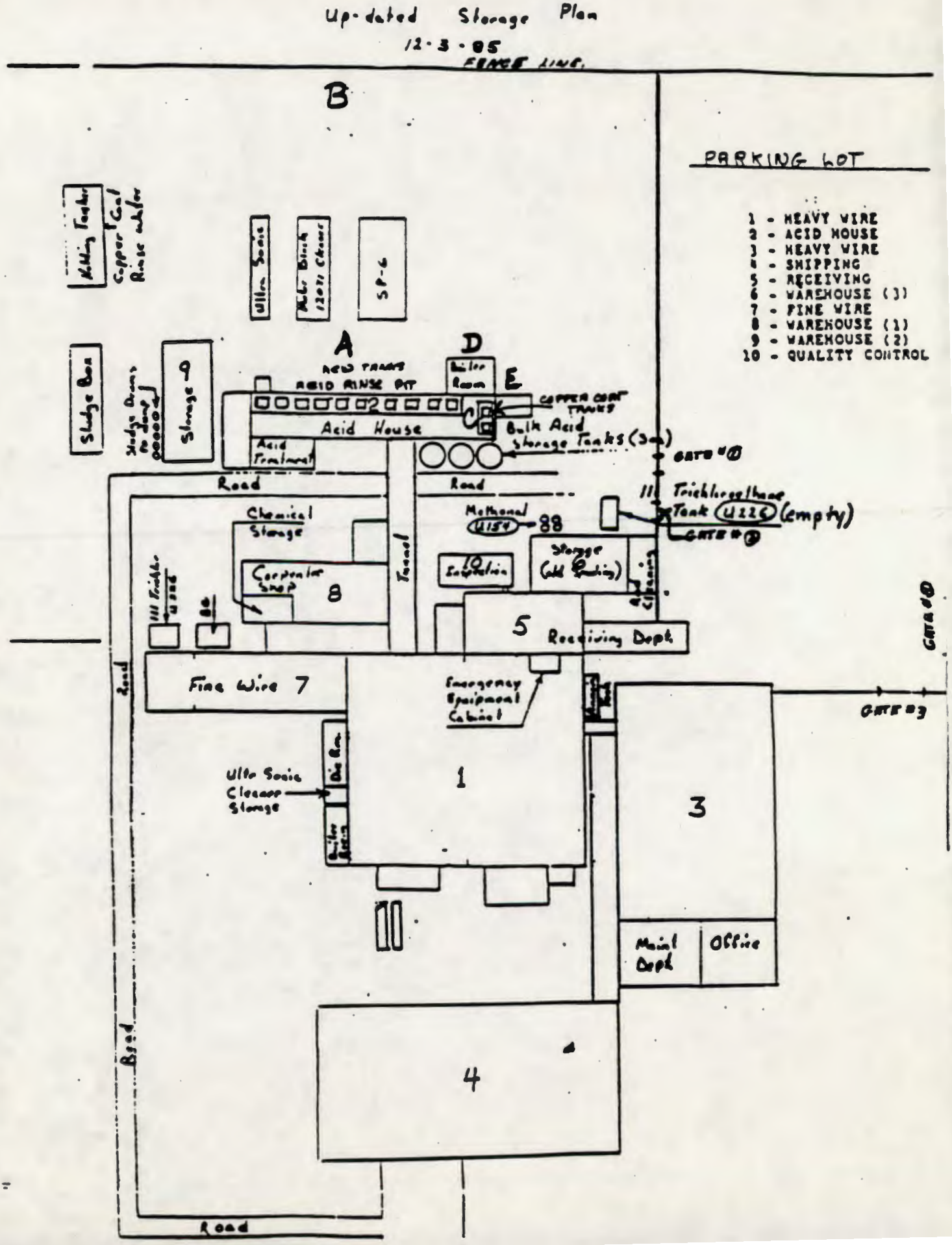
Techalloy has two 1,000 gallon neutralization tanks for treating spent acids and rinsates from the pickling house. These tanks are listed under water pollution control permit #1986-ED-0994 for a total recycling system. Since there is no discharge from this wastewater treatment system the tanks are regulated under RCRA and will be required to close under the regulations. The system has not been operated since November 8, 1988. The unit is on stand-by if haulers are unable to come out and remove spent pickle liquors from the process tanks.

Container Treatment

Techalloy has one 3,000 gallon tanker truck used for treating cyanide waste from the plating process by adding bleach. This unit has not been used since April 9, 1985. The current plating system employs heating, evaporating and filtering the plating tanks so that the only waste that exists is filter residue (F008, D003).

Techalloy has one accumulation area for hazardous and non-hazardous drums located outside on the north end of the building. The area is graveled and fenced within the outer lot.

Techalloy has two accumulation tanks (10,500 gallons and 16,500 gallons) located in the pickling house which accumulate rinsate waters from the pickling process.


Up-dated Storage Plan
12-3-85
FENCE LINE
B
PARKING LOT
1 - HEAVY WIRE
2 - ACID HOUSE
3 - HEAVY WIRE
4 - SHIPPING
5 - RECEIVING
6 - WAREHOUSE (3)
7 - FINE WIRE
8 - WAREHOUSE (1)
9 - WAREHOUSE (2)
10 - QUALITY CONTROL
Sludge Box
Copper Coil Rinse water
Ultra Sonic
Alkaline Cleaner 120°F
SP-6
Sludge Drums
Storage 9
A
NEW TANKS
ACID RINSE PIT
D
Boiler Room
E
COPPER COAT TANKS
Acid House
Acid Treatment
Bulk Acid Storage Tanks (3)
GATE #1
Road
Road
Trichloroethane Tank U226 (empty)
GATE #2
Chemical Storage
Methanol U154
88
Tunnel
10 Emulsion
Storage (old Racking)
Carpenter Shop
8
111 Trichloroethane
Ba
5
Receiving Dept
Fine Wire 7
Emergency Equipment Cabinet
GATE #3
Ultra Sonic Cleaner Storage
Boiler Room
1
3
Maint Dept
Office
4
Road
Road

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE: IL | 02 SITE NUMBER: 00064682S

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Techalloy	Jefferson and Olson Roads				
03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Union	IL	60180	McHenry	111	
09 COORDINATES LATITUDE: 42 14 05.0	LONGITUDE: 88 31 55.0	Marengo North Quad			

10 DIRECTIONS TO SITE (Starting from nearest public road)
Highway 176, South on Union Road, east on High Bridge Road, South on Olson Road to Jefferson

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)			
Techalloy	84 Business Drive			
03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER	
Armonk	NY	10504	(914) 273-4500	
07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)			
Techalloy	Jefferson & Olson Roads			
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER	
Union	IL	60180	(312) 263-6232	

13 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☐ A. RCRA 3001 DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☒ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
☒ YES ☐ NO DATE 3 6 91 (MONTH DAY YEAR)
BY (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR ☒ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)
☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION
1960 (BEGINNING YEAR) | — (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Chlorinated Solvents, Heavy metals, Cyanide

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
Solvents (Environment, Population)
Metals (Environment, Population)
Cyanide (Environment, Population)

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☒ A. HIGH (Inspection required promptly) ☐ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)			03 TELEPHONE NUMBER
Henry Lopes	Techalloy			(914) 273-4500
04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Hank Konzelmann	IEPA	State of Il.	(217) 782-6760	4 8 91 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	0006/46828

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 [X] OBSERVED (DATE 4/5/90) — POTENTIAL — ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 3074
04 NARRATIVE DESCRIPTION

Groundwater samples collected from on-site and off-site monitoring wells have been found to contain chlorinated solvents, semi-volatiles, and inorganics.

01 [ ] B. SURFACE WATER CONTAMINATION — 02 [ ] OBSERVED (DATE:) — POTENTIAL — ALLEGED
03 POPULATION POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION

Unknown

01 [X] C. CONTAMINATION OF AIR — 02 [ ] OBSERVED (DATE:) — POTENTIAL — [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 3074
04 NARRATIVE DESCRIPTION

The past practice of dumping solvents onto a pad and into an impoundment specifically for evaporation indicates the existence of an air exposure route.

01 [X] D. FIRE/EXPLOSIVE CONDITIONS — 02 [ ] OBSERVED (DATE:) — [ ] POTENTIAL — [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION

Volatilizing solvents present an explosive/fire potential.

01 [X] E. DIRECT CONTACT — 02 [ ] OBSERVED (DATE:) — [ ] POTENTIAL — [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 118
04 NARRATIVE DESCRIPTION

The past practice of dumping materials on to the ground presents a high potential for direct contact. It does not appear that the dumping areas have been remediated.

01 [X] F. CONTAMINATION OF SOIL — 02 [ ] OBSERVED (DATE) — POTENTIAL — [X] ALLEGED
03 AREA POTENTIALLY AFFECTED: 10 (Acres)
04 NARRATIVE DESCRIPTION

It has been reported by the company that materials were dumped onto the ground.

01 [X] G. DRINKING WATER CONTAMINATION — 02 [ ] OBSERVED (DATE) — [ ] POTENTIAL — [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 700
04 NARRATIVE DESCRIPTION

Groundwater contamination has been documented in monitoring wells in the vicinity of drinking water wells. One monitoring well (HBR) is directly upgradient of a private well and was found to contain 3700 ppb of 1,1,1-Trichloroethane.

01 [ ] H. WORKER EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE) — [ ] POTENTIAL — [ ] ALLEGED
03 WORKERS POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION

Unknown

01 [ ] I. POPULATION EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE:) — [ ] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION

Unknown

Techalloy
Chemical Summary

July 7, 1988 Sampling Event

Tests Performed:
Total Metals: W1B
VOCs: W1B
BNA: W1B

Parameter (ug/g)	W1B
Phenanthrene	2.8
Fluoranthene	3.6
Pyrene	2.8
Benzo(a)anthracene	1.3
Chrysene	1.4
Cyanide	0.06
Aluminum	4450
Arsenic	2.1
Barium	63.6
Calcium	117000
Chromium	13.8
Copper	67.8
Iron	12700
Lead	191
Madnesium	65700
Manganese	456
Mercury	0.07
Nickel	21.2
Potassium	615
Silver	2.54
Sodium	244
Thallium	25.4
Zinc	127

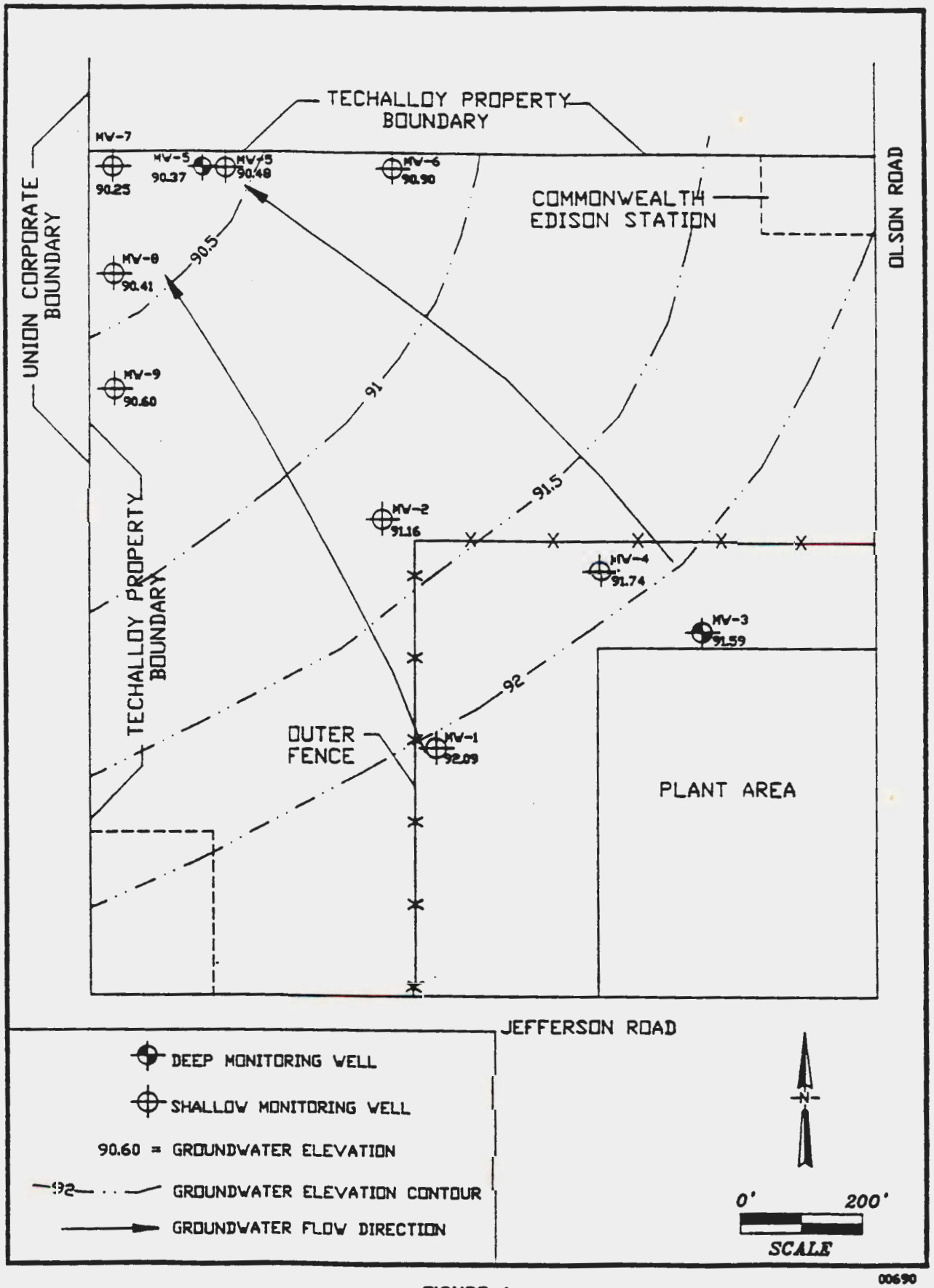


FIGURE 1
GROUNDWATER ELEVATION CONTOUR MAP
TECHALLOY – UNION, ILLINOIS

March 21, 1990 Sampling Event - California Chem (NET)
Union Well #3

Tests Performed: VOCs, Total Metals, pH, Alkalinity, Hardness, Ammonia, Nitrates, Sulfates

Parameter	mg/l
Alkalinity	380
Chloride	670
Hardness	952
Ammonia	36
Nitrates	0.04
Sulfate	700
Arsenic	0.001
Barium	0.124
Calcium	250
Iron	7.05
Magnesium	102
Manganese	0.18
Nickel	0.02
Potassium	25.9
Sodium	266

4/5/90 Sampling Event - Techalloy (Weston)

Tests Performed:
VOCs: MW2, MW5, MW5D (deep), MW6, MW7, MW8, MW9
Soluble Metals: MW5, MW5D, MW6, MW7, MW8, MW8

Parameter (ppb)	MW2 RFW7	MW5 RFW1	MW5D RFW2	MW6 RFW3	MW7 RFW4	MW8 RFW5	MW9 RFW6	Obj
Mthylne Chlrde	--	5	4	5	**24**	5	--	5
1,1-DCE	**100**	**18**	5	--	**720**	**54**	--	7
1,1-DCA	86	4	6	--	290	110	--	--
1,2-DCE	30	7	2	--	77	18	--	
Chloroform	--	--	--	--	4	--	--	
1,2-DCA	--	--	--	--	**11**	--	--	5
1,1,1-TCA	**3000**	**1100**	**300**	14	**15000**	**1500**	18	200
TCE	**99**	**27**	**300**	--	**520**	**130**	--	5
1,1,2-TCA	**6**	--	--	--	**35**	--	--	0.028
MIBK	**16**	--	--	**36**	--	--	--	.35
PCE	**340**	**450**	--	**52**	**570**	**530**	3	5
Arsenic	--	--	--	9.4	--	--	--	50
Lead	--	--	--	18	--	--	--	50

(b) (9)

June 7, 1990 Sampling Event
Residential Wells: RS01, RS05
Tests Performed: VOCs: RS01, RS05

Parameter (ppb)	RS01	RS05	Obj
Methylene Chloride	**12**	**8**	5
1,1,1-Trichloroethane	5	--	200

June 8, 1990 Sampling Event
Tests Performed: VOCs: RS02 (230 foot well) - **None Detected**

June 11, 1990 Sampling Event - Techalloy

Residential Wells
Tests Performed:
VOCs: RS03, RS04, RS05

RS01 - (b) (6), (b) (9)
RS02 - (b) (6), (b) (9)
RS03 - (b) (9)
RS04 - (b) (6), (b) (9)
RS05 - (b) (6), (b) (9)
RS06 - (b) (9)

Parameter (ppb) / Depth:	RS01 --	RS02 --	RS03 20'	RS04 25'	RS05 30'	Blank	Obj
Methylene Chloride	**12**	3	3	3	**8**	1	5

June 28, 1990 Sampling Event
Tests Performed:
VOCs: OS (Outside Spigot), US (Utility Sink)

Parameter (ppb)	OS	US	Blank	Obj
Methylene Chloride	**18**	**7**	--	5
1,1,1-Trichloroethane	--	4	--	200

August 29, 1990 Sampling Event - (Weston) Techalloy
Tests Performed:
VOCs: MW01, MW02, MW03, MW04, MW05, MW05D, MW06, MW07, MW08, MW09, HBR
BNAs: MW09
Soluble As, Cd, Cr, Cu, Pb, Hg: All

Parameter (ppb)	MW01	MW02	MW03	MW04	MW05	MW05 D	MW06	Obj
1,1-DCE	--	--	--	**190**	**210**	--	--	7
1,1-DCA	--	--	--	200	95	--	--	--
1,2-DCE	--	--	--	97	8	--	--	
1,2-DCA	--	--	--	--	--	--	--	5
1,1,1-TCA	--	100	--	**6000**	**5600**	**310**	39	200
TCE	--	**11**	--	**270**	**110**	**270**	--	5
1,1,2-TCA	--	--	--	**18**	**9**	--	--	0.028
PCE	--	**76**	--	**1000**	**620**	--	**52**	5
Arsenic	--	--	4.3	--	--	--	--	
Copper	--	--	--	--	--	43	--	
Mercury	--	0.21	--	--	--	--	--	
Lead	2	3.7	--	3.2	--	8.4	36	

Parameter (ppb)	MW07	MW08	MW09	HBR	Obj
Methylene Chloride	--	--	**8**	**10**	5
1,1-DCE	**85**	--	--	**120**	7
1,1-DCA	59	5	--	5	--
1,2-DCE	24	--	--	8	
1,2-DCA	--	--	--	**8**	5
1,1,1-TCA	**2800**	190	--	**3700**	200
TCE	**140**	**100**	--	**24**	5
1,1,2-TCA	--	--	--	--	0.028
PCE	**370**	**270**	--	**320**	5
Lead	7.2	2.8	3.4	2.1	

December 12, 1990 Residential Well Sampling Event -Techalloy/Weston

Tests Performed:
VOCs (Method 524): All

RW1 - (b) (6), (b) (9)
RW2 - (b) (6), (b) (9)
RW3 - (b) (6), (b) (9)
RW4 - (b) (6), (b) (9)
RW5 - (b)
RW6 - (b) (6), (b) (9)
RW7 - (b) (6), (b) (9)

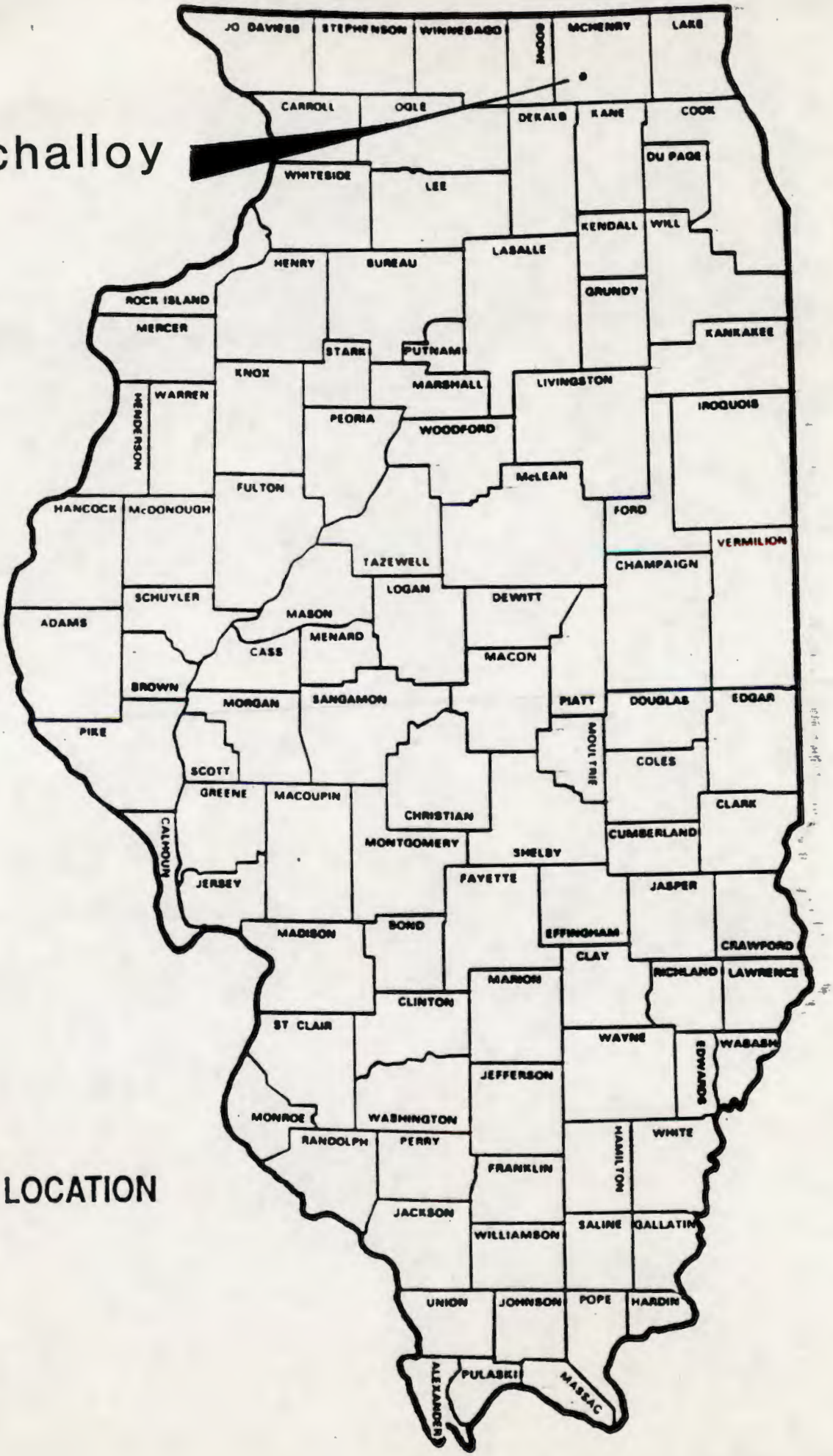
Parameter (ppb)	RW1	RW2	RW3	RW4	RW5	RW6	RW7	RW8
Chloroform	--	--	--	1	--	--	--	--
1,1,1-Trichloroethane	9	--	--	4	--	--	--	--
Carbon Tetrachloride	--	--	--	2	--	--	--	--
Tetrachloroethane	--	--	--	4	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	2

December 21, 1990 Sampling Event

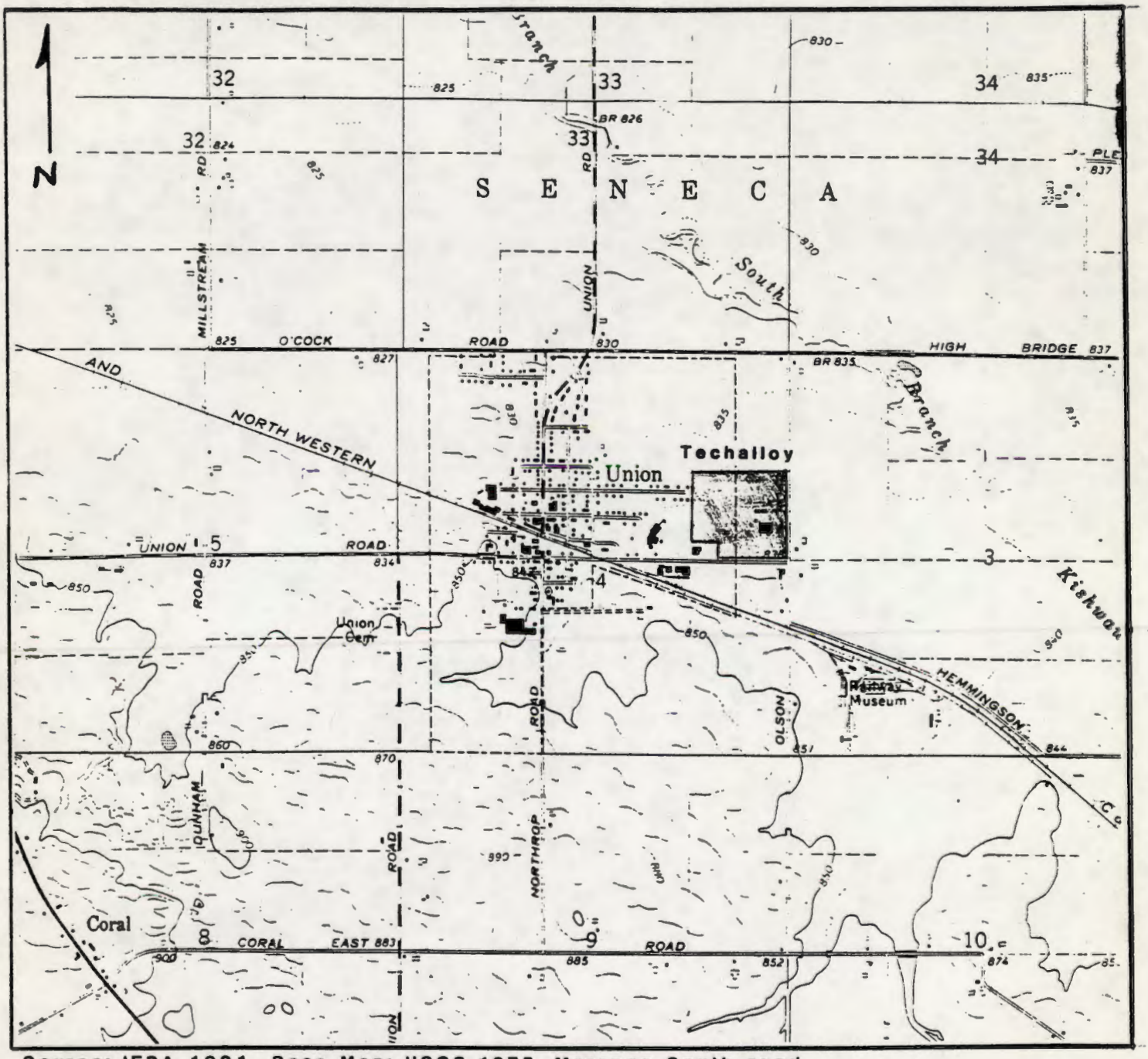
Tests Performed:
VOCs: RW1, RW2 - **None Detected**

RW1 - (b) (9)
RW2 - (b) (9)

Techalloy

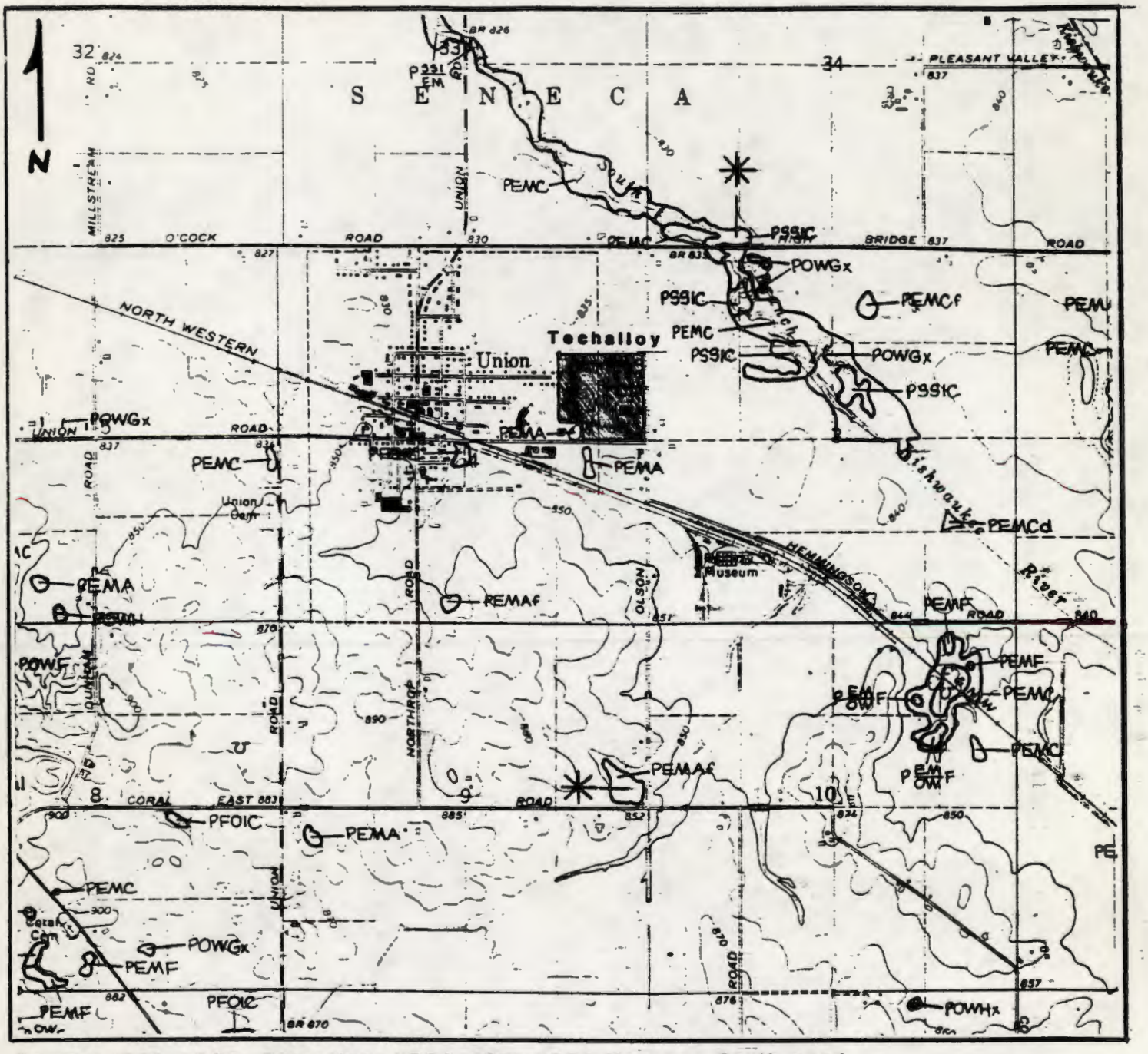


SITE LOCATION



Source: IEPA 1991 Base Map: USGS, 1975. Marengo South quad

AREA MAP



Source: IEPA 1991 Base Map: USGS/USDI 1981 Marengo South quad

National Wetlands Inventory Map

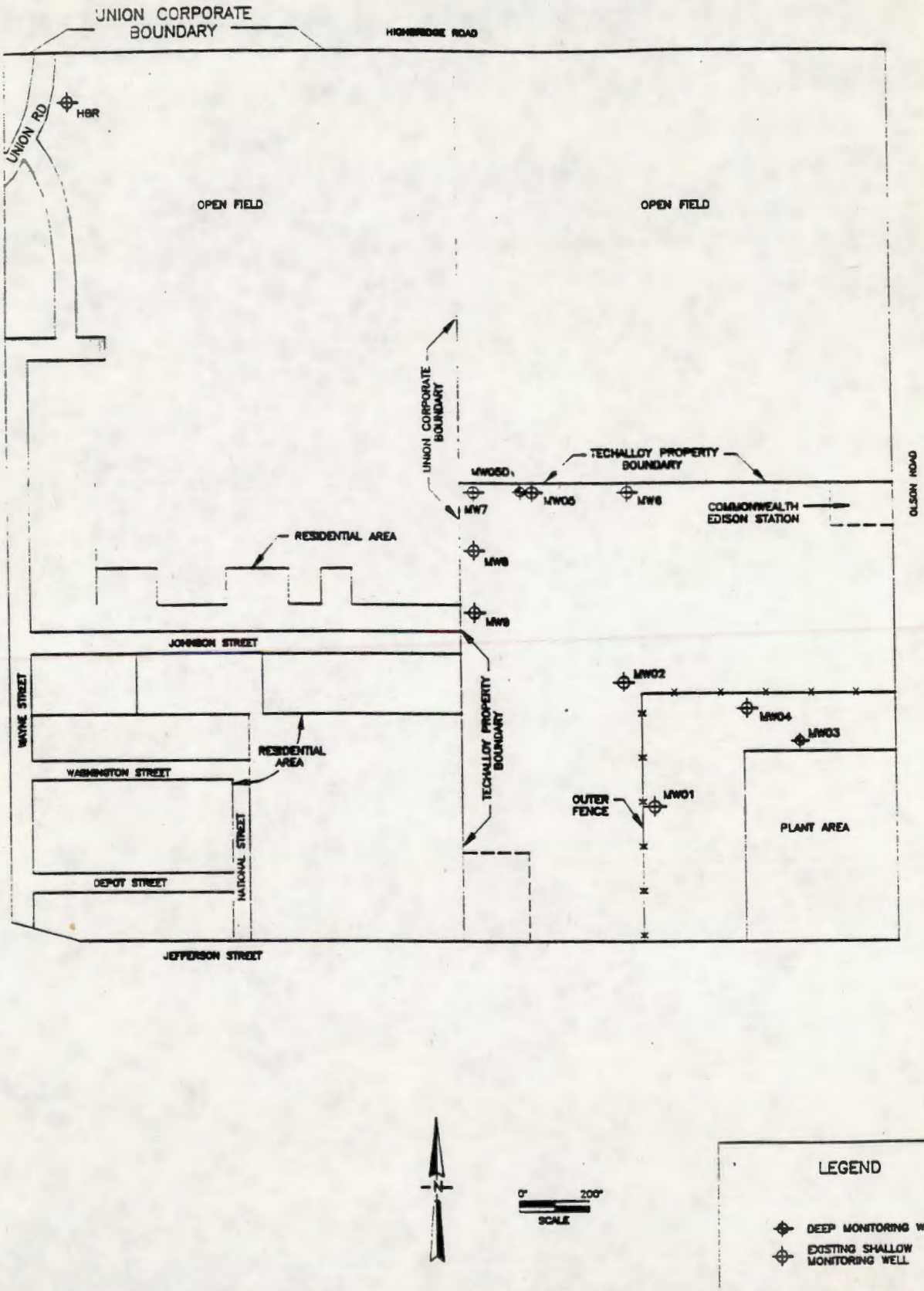
0 1 Mile

ECOLOGICAL SYSTEM

P — PALUSTRINE

No Subsystem

CLASS	RB ROCK BOTTOM	UB UNCONSOLIDATED BOTTOM	AB AQUATIC BED	FL FLAT	ML MOSS-LICHEN	EM EMERGENT	SS SCRUB/SHRUB	FO FORESTED	OW OPEN WATER
Subclass	1 Bedrock 2 Boulder	1 Cobble/Gravel 2 Sand 3 Mud 4 Organic	1 Submergent Algal 2 Submergent Vascular 3 Submergent Moss 4 Floating-leaved 5 Floating 6 Unknown Submergent 7 Unknown Surface	1 Cobble/Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated Persist 6 Vegetated Non-persist	1 Moss 2 Lichen	1 Persistent 2 Nonpersistent 3 Narrow-leaved Nonpersistent 4 Broad-leaved Nonpersistent 5 Narrow-leaved Persistent 6 Broad-leaved Persistent	1 Broad-leaved Deciduous 2 Needle-leaved Deciduous 3 Broad-leaved Evergreen 4 Needle-leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen	1 Broad-leaved Deciduous 2 Needle-leaved Deciduous 3 Broad-leaved Evergreen 4 Needle-leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen	Unknown Bottom

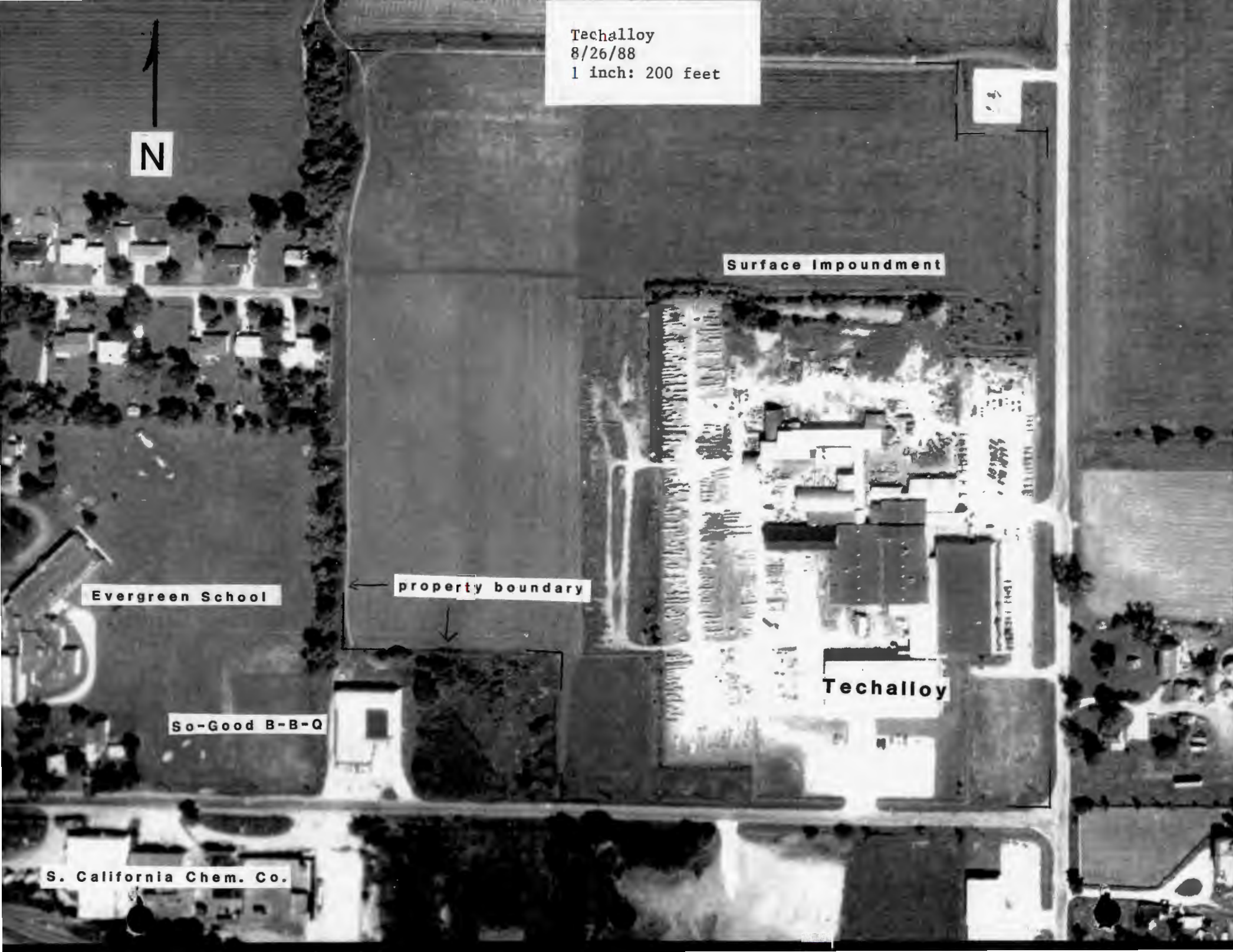


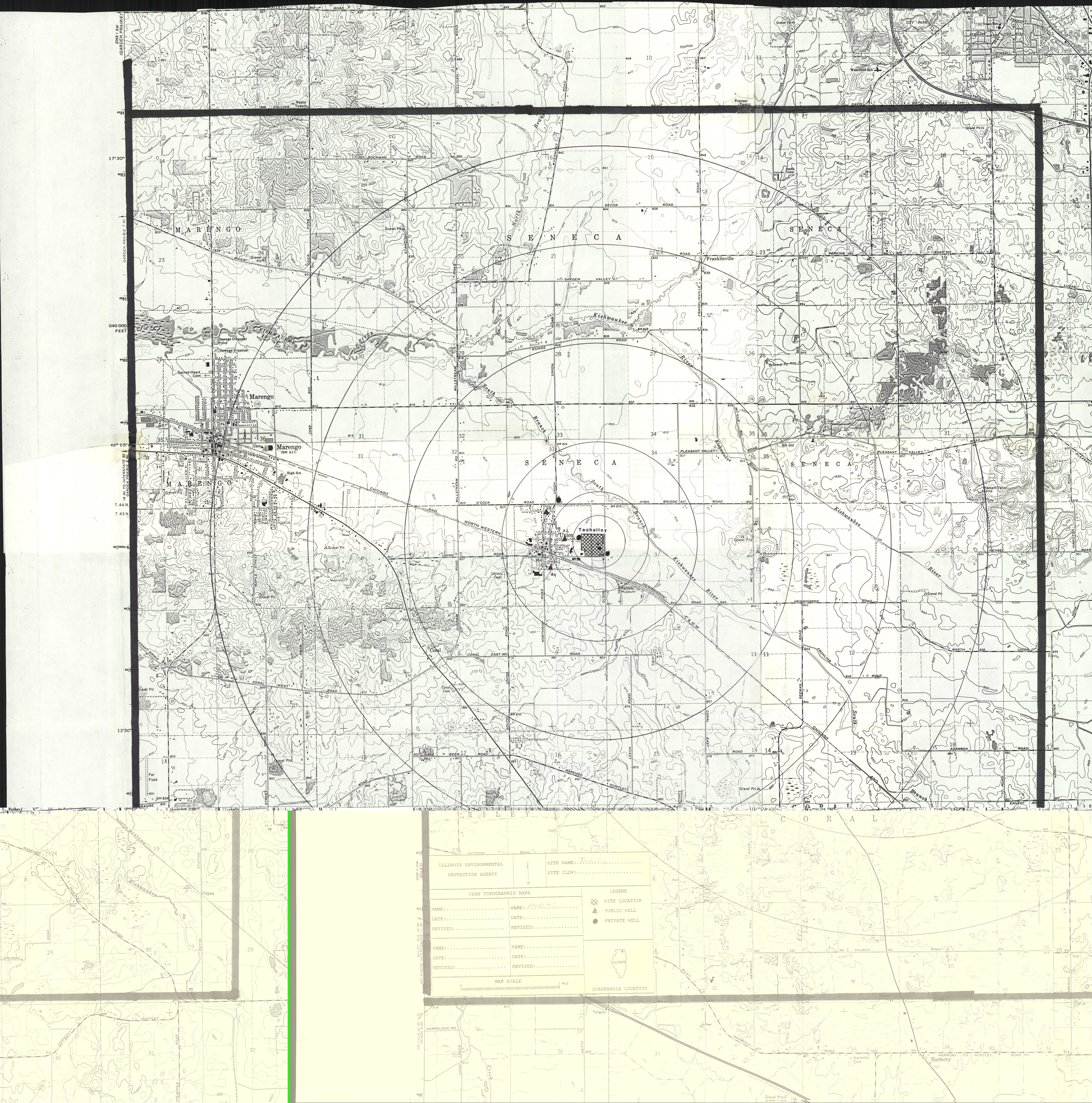
WESTON MANAGERS DESIGNERS/CONSULTANTS	Three Hawthorn Parkway Vernon Hills, Illinois 60061	FIGURE 1	LOCATION OF MONITORING WELLS TECHALLOY UNION, ILLINOIS

19890608 (10 Oct 90) wwk

Residential Well Locations

Village of Union


Techalloy
8/26/88
1 inch: 200 feet
N
Surface Impoundment
Evergreen School
property boundary
Techalloy
So-Good B-B-Q
S. California Chem. Co.



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
N
SITE NAME: Techalloy
SITE ILD#:
USGS TOPOGRAPHIC MAPS
NAME: Woodstock
DATE:
REVISED:
NAME:
DATE:
REVISED:
NAME:
DATE:
REVISED:
LEGEND
SITE LOCATION
PUBLIC WELL
PRIVATE WELL
MAP SCALE
0
1 MILE
ILLINOIS
QUADRANGLE LOCATION
Techalloy
Union
Marengo
Franklinville
SENECA
MARENGO
CORAL
RILEY
Kishwaukee River
South Branch Kishwaukee River
CHICAGO AND NORTH WESTERN
Harmony
Coyne
Tollgate

---E: March 6, 1991

TIME: 4:20 pm

PHOTOGRAPH TAKEN BY:

Hank Konzelmann

PHOTO NUMBER: 1

LOCATION: 1110900003

Techalloy / Union

McHenry County

COMMENTS: PICTURE TAKEN TOWARD South East. Note monitoring well Techalloy is behind the houses

DATE: March 6, 1991

TIME: 4:25 pm

PHOTOGRAPH TAKEN BY:

Hank Konzelmann

PHOTO NUMBER: 2

LOCATION: 1110900003

Techalloy / Union

McHenry County

COMMENTS: PICTURE TAKEN TOWARD East. Note Evergreen School in foreground & Techalloy behind it.

DATE: March 6, 1991

TIME: 4:50 pm

PHOTOGRAPH TAKEN BY:
Hank Konzelmann

PHOTO NUMBER: 3

LOCATION: 1110900003
Techalloy / Union
McHenry County

COMMENTS: PICTURE TAKEN TOWARD
East. Toward Techalloy
from subdivision

DATE: March 6, 1991

TIME: 4:58 pm

PHOTOGRAPH TAKEN BY:
Hank Konzelmann

PHOTO NUMBER: 4

LOCATION: 1110900003
Techalloy / Union
McHenry County

COMMENTS: PICTURE TAKEN TOWARD
Northwest. Direction of
plume. Note farmhouse in
distance downgradient

TE: March 6, 1991

TIME: 4:34 pm

PHOTOGRAPH TAKEN BY:

Hank Konzelmann

PHOTO NUMBER: 5

LOCATION: 1110900003

Techalloy / Union

McHenry County

COMMENTS: PICTURE TAKEN TOWARD

Southwest

DATE: March 6, 1991

TIME: 4:34 pm

PHOTOGRAPH TAKEN BY:

Hank Konzelmann

PHOTO NUMBER: 6

LOCATION: 1110900003

Techalloy / Union

McHenry County

COMMENTS: PICTURE TAKEN TOWARD

West

DATE: March 6, 1991

TIME: 4:35 pm

PHOTOGRAPH TAKEN BY:

Hank Konzelmann

PHOTO NUMBER: 7

LOCATION: 1110900003

Techalloy / Union

McHenry County

COMMENTS: PICTURE TAKEN TOWARD

South. Note proximity

of farm to the Techalloy

facility

DATE: March 6, 1991

TIME: 4:35 pm

PHOTOGRAPH TAKEN BY:

Hank Konzelmann

PHOTO NUMBER: 8

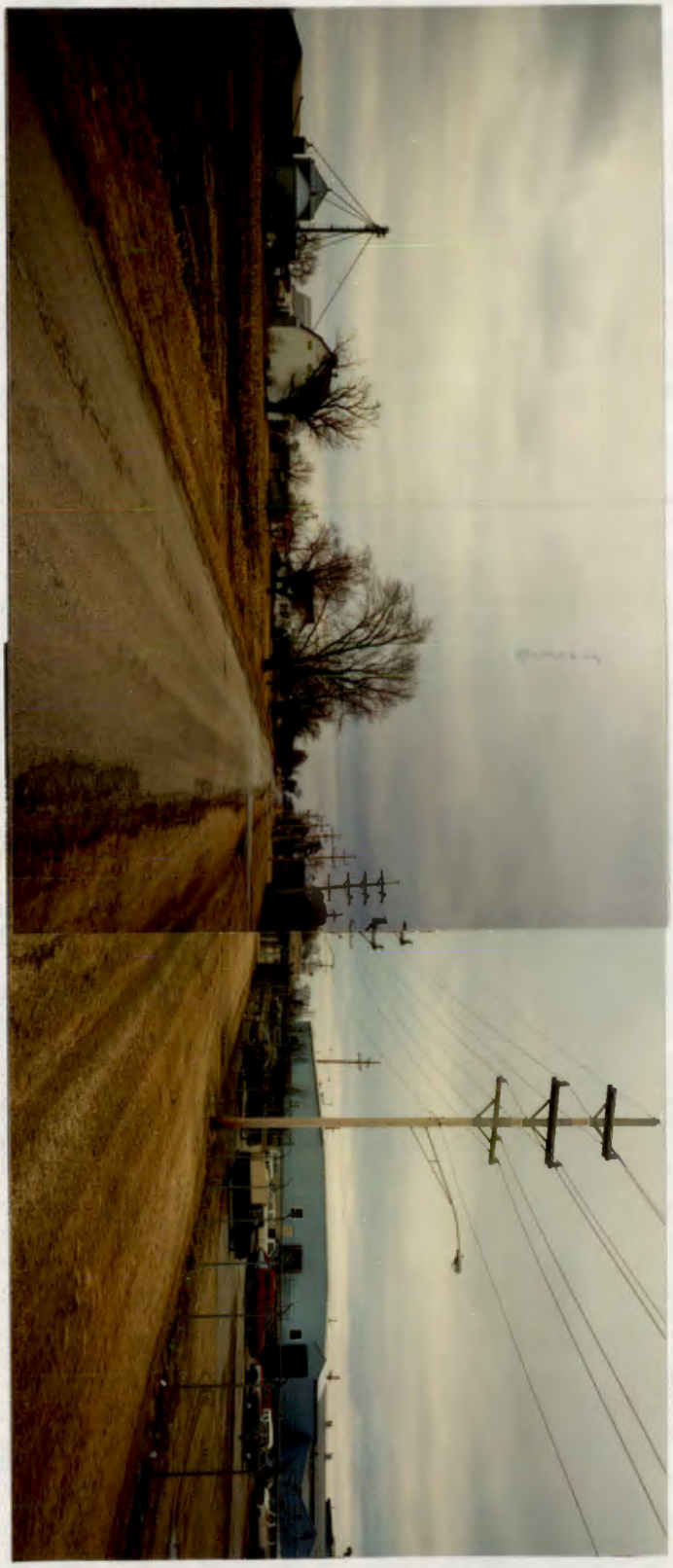
LOCATION: 1110900003

Techalloy / Union

McHenry County

COMMENTS: PICTURE TAKEN TOWARD

Southwest



DATE: March 6, 1991

TIME: 4:42 pm

PHOTOGRAPH TAKEN BY:

Hank Konzelmann

PHOTO NUMBER: 9

LOCATION: 1110900003

Techalloy / Union

McHenry County

COMMENTS: PICTURE TAKEN TOWARD

East

DATE: March 6, 1991

TIME: 4:42 pm

PHOTOGRAPH TAKEN BY:

Hank Konzelmann

PHOTO NUMBER: 10

LOCATION: 1110900003

Techalloy / Union

McHenry County

COMMENTS: PICTURE TAKEN TOWARD

Southeast

DATE: March 6, 1991

TIME: 4:42pm

PHOTOGRAPH TAKEN BY:

Hank Konzelmann

PHOTO NUMBER: 11

LOCATION: 1110900003

Techalloy / Union

McHenry County

COMMENTS: PICTURE TAKEN TOWARD

Northeast

DATE: March 6, 1991

TIME: 4:42pm

PHOTOGRAPH TAKEN BY:

Hank Konzelmann

PHOTO NUMBER: 12

LOCATION: 1110900003

Techalloy / Union

McHenry County

COMMENTS: PICTURE TAKEN TOWARD

Northeast

E: March 6, 1991

TIME: 4:42 pm

PHOTOGRAPH TAKEN BY:

Hank Konzelmann

PHOTO NUMBER: 13, 14

LOCATION: 1110900003

Techalloy / Union

McHenry County

COMMENTS: PICTURE TAKEN TOWARD

West

DATE: March 6, 1991

TIME: 4:42 pm

PHOTOGRAPH TAKEN BY:

Hank Konzelmann

PHOTO NUMBER: 15

LOCATION: 1110900003

Techalloy / Union

McHenry County

COMMENTS: PICTURE TAKEN TOWARD

~~North~~ Northwest

--TE: March 6, 1991

TIME: 5:20 pm

PHOTOGRAPH TAKEN BY:

Hank Konzelmann

PHOTO NUMBER: 16

LOCATION: 1110900003

Techalloy / Union

McHenry County

COMMENTS: PICTURE TAKEN TOWARD

West Pit solvents were

reported dumped in past

DATE: March 6, 1991

TIME: 5:23 pm

PHOTOGRAPH TAKEN BY:

Hank Konzelmann

PHOTO NUMBER: 17

LOCATION: 1110900003

Techalloy / Union

McHenry County

COMMENTS: PICTURE TAKEN TOWARD

North. Permanganate

Drums

DATE: March 6, 1991

TIME: 5:30 pm

PHOTOGRAPH TAKEN BY:

Hank Konzelmann

PHOTO NUMBER: 18

LOCATION: 1110900003

Techalloy / Union

McHenry County

COMMENTS: PICTURE TAKEN TOWARD

North. Permanganate

Drums

DATE: March 6, 1991

TIME: 4:42 pm

PHOTOGRAPH TAKEN BY:

Hank Konzelmann

PHOTO NUMBER:

LOCATION: 1110900003

Techalloy / Union

McHenry County

COMMENTS: PICTURE TAKEN TOWARD

North.

DATE: June 7, 1990

TO: Division File

FROM: Hank Konzelmann

SUBJECT: 1110900003 - McHenry Co.
Union/Techalloy Company
Superfund/Tech. Repts.

On April 22, 1990, a meeting was held at the Techalloy facility in Union, Illinois. The people in attendance were:

Philippe Maitrepierre - Techalloy
Henry Lopes - Techalloy
Richard Piwonka - Techalloy
Tom Stotler - Techalloy
John Thorsen - Weston
Stan Black - IEPA
Hank Konzelmann - IEPA

Techalloy started out by presenting a fact sheet they had prepared about the situation for distribution to concerned citizens. They then explained the work that had been done and what they were planning to do. John Thorsen (Weston) stated that a report had been prepared and that he would get clearance to send it to us. Techalloy stated that they were planning to set up a groundwater collection system which will be used in conjunction with a stripper tower to remediate the groundwater plume.

Stan and I discussed the Agency's role and involvement in voluntary cleanups. Stan gave several suggestion for handling community relations and provided the names of contacts in local media, city government, and local interest groups. I gave an overview of the oversight process and cleanup objectives system. I let them know that an advance payment request and an oversight agreement would be forthcoming.

Following this meeting, a tour of the site was given with all areas of interest pointed out. I took photographs of the grounds, wells, and surrounding area.

The meeting ended at 12:00 noon.

DATE: May 22, 1990

TIME: 10:47 AM

Photograph by:

Hank Konzelmann

Location: 1110900003

Union / Techalloy

McHenry County

Comments: Picture taken towa

North Note Drinking

water wellhead by tree

(1)

(b) (9)

[redacted]

DATE: May 22 1990

TIME: 10:51 AM

Photograph by:

Hank Konzelmann

Location: McHenry County

Union / Techalloy

Comments: Picture taken toward

South Note proximity of

East neighbor.

DATE: May 22, 1990

TIME: 11:00 AM

Photograph by:

Hank Konzelmann

Location: 1110900003

Union / Techalloy

McHenry County

Comments: Picture taken toward

West. General yard

appearance

③

DATE: May 22, 1990

TIME: 11:04 AM

Photograph by:

Hank Konzelmann

Location: McHenry County

Union / Techalloy

Comments: Picture taken toward

East. Suspected Source

area

④

DATE: May 22, 1990

TIME: 11:10 AM

Photograph by:

Hank Konzelmann

Location: 1110900003

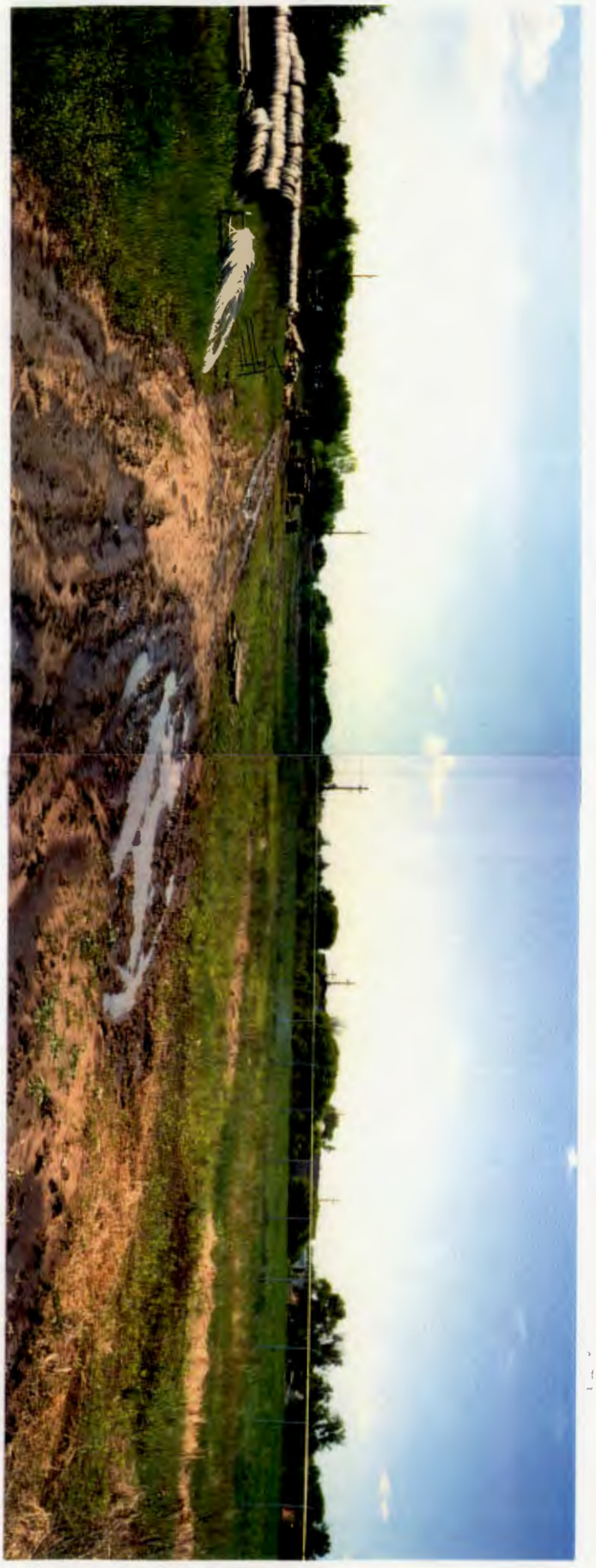
Union / Techalloy

McHenry County

Comments: Picture taken toward

South

(5)



DATE: May 22, 1990

TIME: 11:10 AM

Photograph by:

Hank Konzelmann

Location: McHenry County

Union / Techalloy

Comments: Picture taken toward

Southwest

(6)

DATE: May 22, 1990

TIME: 11:11 AM

Photograph by:

Hank Konzelmann

Location: 1110900003

Union / Techalloy

McHenry County

Comments: Picture taken toward

West

⑦

DATE: May 22, 1990

TIME: 11:11 AM

Photograph by:

Hank Konzelmann

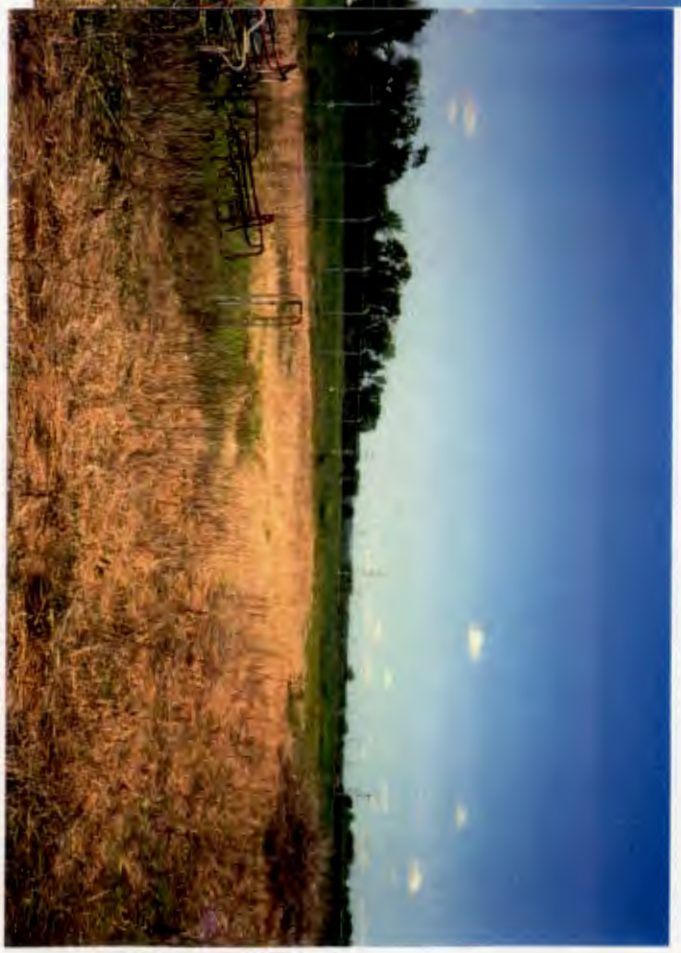
Location: McHenry County

Union / Techalloy

Comments: Picture taken toward

Northwest

⑧



DATE: May 22, 1990

TIME: 11:13 AM

Photograph by:

Hank Konzelmann

Location: 1110900003

Union / Techalloy

McHenry County

Comments: Picture taken toward

North

(9)

DATE: May 22, 1990

TIME: 11:16 AM

Photograph by:

Hank Konzelmann

Location: McHenry County

Union / Techalloy

Comments: Picture taken toward

Northwest

(10)

DATE: May 22, 1990

TIME: 11:20 AM

Photograph by:

Hank Konzelmann

Location: 1110900003

Union / Techalloy

McHenry County

Comments: Picture taken toward

South Yard Appearance

(11)

DATE: [illegible]

TIME: _____

Photograph by:

_____

Location: McHenry County

_____

Comments: Picture taken toward

No Picture

IL 532-0603
L/NPC 24 (Rev. 7/86)

REFERENCES

Reference 1: April 15, 1986 letter from Robert Sasman of the Illinois State Water Survey (ISWS) including copies of the IEPA water quality analysis for samples collected from the Village Well #3, the Southern California Company well, and several private wells in October of 1985.

Reference 2: Excerpt from the 1976 ISWS "Public Groundwater Supplies in McHenry County" pertaining to the Union area.

Reference 3: Copies of area well logs from the ISWS.

Reference 4: Copy of deed transactions for Techalloy.

Reference 5: Agency memo summarizing the March 6, 1991 site recon and containing the findings of a title search on the Techalloy facility.

Reference 6: May 24, 1990 letter from Techalloy containing narrative, analytical results, and a well log.

Reference 7: December 5, 1990 letter from the Village of Union containing a map showing the locations of residential wells and listing the names and addresses of the owners.

Reference 8: May 22, 1990 Fact Sheet prepared by Techalloy

REFERENCE NUMBER 1

State Water Survey Division

ENR

2204 Griffith Drive
Champaign, Illinois 61820
217/333-2210

Illinois Department of
Energy and Natural Resources

Northern Regional Office
101 North Island Avenue
Batavia, Illinois 60510
(217) 333-1634
(312) 879-6466

April 15, 1986

Mr. James VanDerKloot
Illinois Attorney General's Office
100 West Randolph Street, 13th Floor
Chicago, Illinois 60601

Dear Jim:

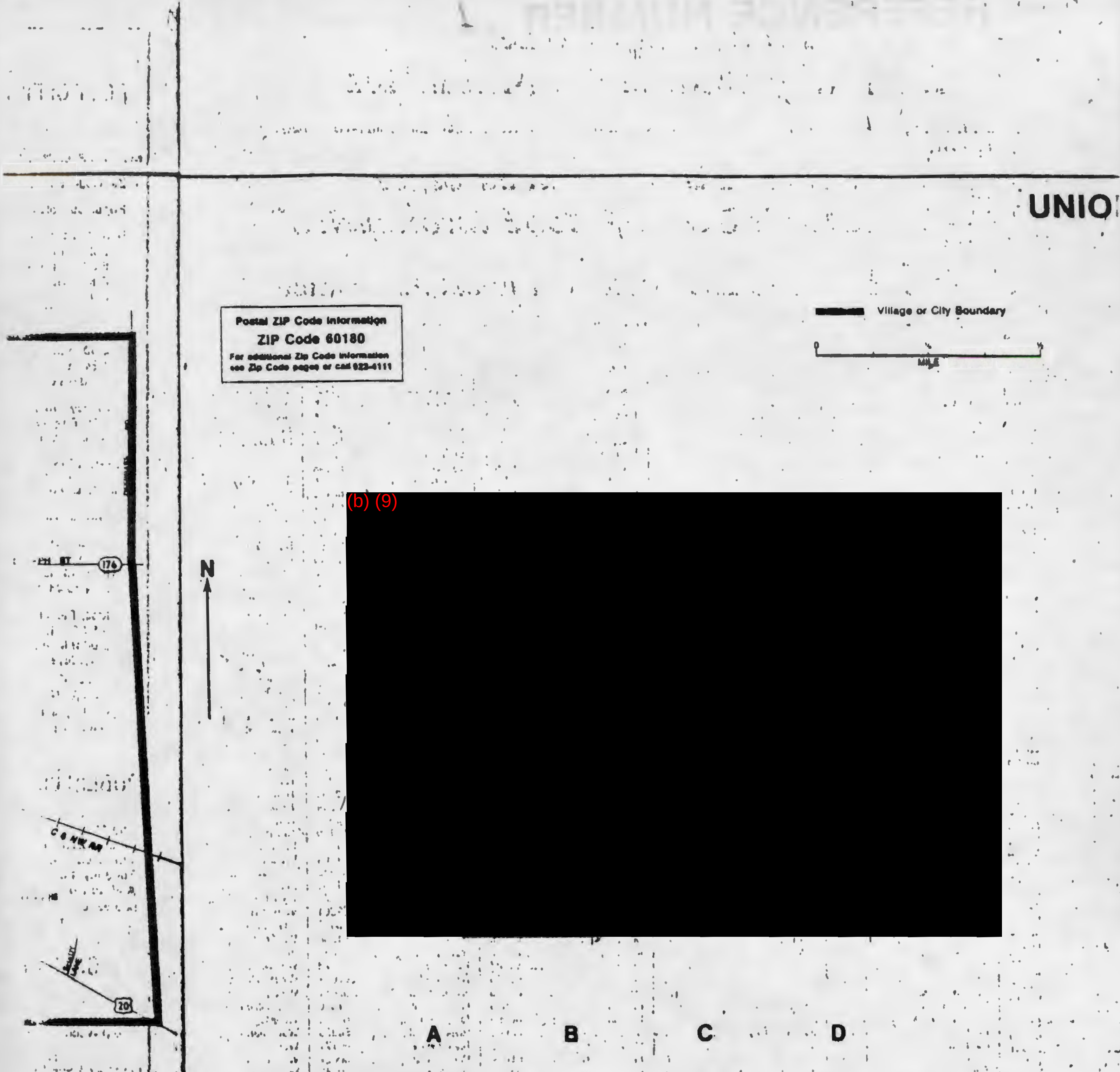
In regard to our continuing investigation of the problem at Union, McHenry County, I am sending you copies of the IEPA water quality analyses for samples collected from the Village Well No. 3, the Southern California Company well, and several private domestic wells in October 1985. Also attached is a copy of a memorandum written by Manny Abad, IEPA Division of Public Water Supplies, after his two visits to Union in 1985. Manny is not aware that there has been any more pumpage of the Village well since the Fall of 1985.

Very truly yours,
STATE WATER SURVEY DIVISION

Bob Sasman

Robert T. Sasman
Hydrologist

RTS/jm
Encl.
cc: Illinois EPA - Land Pollution Control Division
Allen Wehrmann



[redacted]

A B C D

CLARK ST	B2
COUNTRY LN	A3
DEPOT ST	C2
ELM ST	B3
FAIRFIELD DR	B3
HEMMINGSEN RD	D1
JACKSON ST	B2
JEFFERSON ST	B2
JOHNSON ST	B2
MAIN ST	B3
MALLETT CT	C3
MEADOW LN	A3
NATIONAL ST	C2
NORTHROP RD	B1
O'COCK RD	C3
OLSON RD	D2
PARK ST	B3
PRAIRIE ST	B1
SOUTH ST	B2
SUNVIEW DR	B3
UNION RD	A1
VINE ST	B2
WASHINGTON ST	B2
WAYNE ST	C2

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY MEMORANDUM

DATE: December 13, 1985

TO: Charles Bell, DPWS, Springfield

FROM: Manny Abad, DPWS, Elgin

SUBJECT: The High Chloride Concentration in the raw water at Union Community Well #3.

The Village of Union located in McHenry County has two drilled wells, Well #2 and Well #3. Well #2 finished in dolomite was drilled to a depth of 192 ft. and Well #3 finished in sand and gravel was drilled to a depth of 80 ft.

A mineral analysis of the raw water at Well #3 collected on January 22, 1985 showed a significant increase in the chloride concentration, from 252 mg/l (7/6/82) to 810 mg/l. Village officials were informed of the results via a letter mailed on April 9, 1985 recommending that a replacement well be drilled at a new location (see letter attached). The Village officials reported a lack of funds for a new well construction and requested assistance through the Governor's office. This request was referred to this office.

I made a visit to Union on October 28, 1985 and collected water samples from the Village's Well #3 and from several shallow private wells (15' - 30' deep) around town for a partial mineral analysis. Completed laboratory analysis indicated a chloride concentration of 486 mg/l at Well #3 and a range of 12 mg/l to 86 mg/l at the private wells. (See map attached.)

I made another visit to Union on December 11, 1985 accompanied by Bob Sasman of the State Water Survey. We inspected the area for possible clues as to the source of the contamination. One industry that might have contributed to the well contamination is Southern California located on the southeast side of town. The Southern California plant was disposing of waste chemicals in a lagoon during the 1970's. Presently the waste chemicals are reported to be hauled out of town by tanker. Road salt is another possible source of contamination.

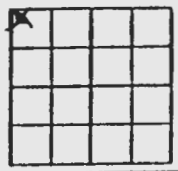
Mr. Bob Sasman has indicated that he will set up a meeting of the various state agencies to help formulate a plan of action to assist the Village With State help, the Village may be able to define and correct the problem and thus be able to continue to use Well #3. However, the least cost solution to the problem is probably for the Village to drill a new well south of town, up structure from the present area of contamination.

By _____
Manny Abad

MA:rnw
cc: Bob Sasman
Roger Selberg
File

IL 532-0570

Town Union Township Coral Map No. 14
Company (b) (6) No. R. 6E
Farm (b) (6) No. T. 43 N Sec. 4
Authority (b) (6)
Elevation
Collector
Confidential Date Drilled Aug. 1940
(b) (6)

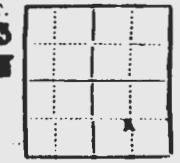


No.	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Red clay	123		123	
	Water vein	3		126	
	126 5/8" casing				

COUNTY McHenry INDEX NO. 1404
DRI ECORD
(AS... 20M) ILLINOIS GEOLOGICAL SURVEY, URBANA (10-40)

John C. Moore Corporation, Rochester, N. Y. Binder and holes in leaves, each Patented 1906.

TOWN TOWNSHIP Coral Map No. 14
COMPANY (b) (6) R. 6 E
FARM (b) (6) No. T. 43 N
AUTHORITY (b) (6) No.
ELEVATION 845
COLLECTOR Workman DATE DRILLED
CONFIDENTIAL



No.	STRATA	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Drift	115		115	
	Rock	115		230	

845
115
730

County MCHENRY Index No. 1404.6B
T.—DRILL RECORD
(67729— 5-27)

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed January 1, 1979

10. Property owner (b) (6) Well No. _____
Address (b) (6)
Driller John Gilgard License No. 92-524
11. Permit No. 20725 Date _____
12. Water from Limestone (Formation) 13. County McHenry
at depth 121 to 180 ft.
14. Screen: Diam. _____ in.
Length: _____ ft. Slot _____
Sec. 4
Twp. 43N
Rge. 6E
Elev. _____

SHOW LOCATION IN SECTION PLAT
SE SW NE
(permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	Galv - 15	0	127

16. Size Hole below casing: 4 3/4 in.
17. Static level 35 ft. below casing top which is 2 ft. above ground level. Pumping level 50 ft. when pumping at 20 gpm for 1 hours. Sub pump @ 100'

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Gravel	43	43
Gray Clay & Gravel	84	127
Limestone	53	180
(b) (9)		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED John Gilgard DATE 4/6/78

COUNTY No. 23325
MCHENRY

4-43N-6E

TO DRILLERS

REQUESTED MAIL ORIGINAL TO STATE ASSUMER HEALTH PROTECTION, 535 WEST 61. DO NOT DETACH GEOLOGICAL/WATER E PROPER WELL LOCATION.

Small Comm.

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property (b) (9)
Driller Marvin Nice License No. 102 002458
11. Permit No. 96794 Date October 21, 1980
12. Water from Limestone (Formation) 13. County McHenry
at depth 120 to 205 ft.
14. Screen: Diam. _____ in.
Length: _____ ft. Slot _____
Sec. 4 1/4
Twp. 43N
Rge. 6E
Elev. _____

SHOW LOCATION IN SECTION PLAT
SE SENE
(commercial operation)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5"	Galv. Steel 15 lbs pr ft	0	120

16. Size Hole below casing: 5 in.
17. Static level 10 ft. below casing top which is 1 ft. above ground level. Pumping level 15 ft. when pumping at 10 gpm for 4 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil	3	3
~~Gravel~~	~~32~~	~~35~~
Clay	83	118
Shale	2	120
~~Limestone (Gray & White)~~	~~85~~	~~205~~

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED _____ DATE February 12, 1981

MCH 4-43N 6E

ILLINOIS

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

DIVISION OF PUBLIC WATER SUPPLIES

(1)

CHEMICAL ANALYSIS REPORT FORM

C508569

Special Test

1. Public Water Supply Name: Union
2. County: McHenry
3. Facility Number: 111-0900
4. Mail Report to:
Name: Tim Pac
Address: Village Hall, 6606 Main St.
Post Office: Union State: Ill. Zip Code: 60180

COLLECTOR: Fill in shaded area only. Type or use black ball point pen. See reverse side for explanations and instructions.

This Agency is authorized to require this information under Ill. Rev. Stat., 1979, Chapter 111-1/2, Section 1019. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $10,000.00 and an additional civil penalty up to $1,000.00 for each day the failure continues, a fine up to $1,000.00 and imprisonment up to one year. This form has been approved by the forms Management Center.

Samples scheduled during:

Received by: K. Patel

Date and time in Laboratory: OCT. 28. 1985 3:30 PM

5. Date and time collected: 10/28/85 9:35 Am
6. Sample Collector: E. ABAD
7. Telephone Number:
8. Sample Type:

☐ Distribution: Sampling point address or building: R.R. Creek

☐ Raw-Well #: ____ Depth: ____ Year Drilled: ____

Pumping rate: ____ gpm Hours pumped: ____

☐ Raw-Surface: Inlet depth ____ ft.

Source: ____

Parameter	Reported As	MAC mg/l*	Concentration mg/l*
Ammonium	N		0.28
Potassium	K		
Iron	Fe	1.0	0.08
Manganese	Mn	0.15	0.00
Calcium	Ca		100
Magnesium	Mg		44
Sodium	Na		28
Barium	Ba	1.	
Beryllium	Be		
Boron	B		
Cadmium	Cd	0.010	
Chromium (Total)	Cr	0.05	
Cobalt	Co		
Copper	Cu	5.	
Nickel	Ni		
Silver	Ag	0.05	
Strontium	Sr		
Vanadium	V		
Zinc	Zn	5.	

Parameter	Reported As	MAC mg/l*	Concentration mg/l*
Fluoride	F	1.8**	
Chloride	Cl		49
Nitrate + Nitrite	N	10	
Sulfate	SO_4		31
Alkalinity (pH 4.5)	$CaCO_3$		296
Specific Conductance @ 25°C	mmhos/cm		875
Total Dissolved Solids/EC	TDS		—
Filterable Residue @ 180°C	TDS		
pH	pH units		7.3
Hardness	$CaCO_3$		440
Cyanide	CN	0.2	
Soluble Silicates	SiO_2		
Arsenic	As	0.05	
Lead	Pb	0.05	
Mercury	Hg	2. μg/l	μg/l
Selenium	Se	0.01	

-Laboratory Use Only-

Laboratory Number: C508569

Date Forwarded: NOV. 21. 1985 By: JWD

* Unless Otherwise Indicated

** For those counties of the State North of and including Henderson, McDonough, Fulton, Tazewell, McLean, Ford and Iroquois the MAC is 2.0 mg/l.

[illegible] — 0761

File test for [illegible]

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (3)

DIVISION OF PUBLIC WATER SUPPLIES

CHEMICAL ANALYSIS REPORT FORM

C508570

Public Water Supply Name: Ulin

2. County: McHenry

3. Facility Number: IL-0930

Mail Report to:

Name: Tim Peel

Address: Village Hall, 6600 Main St.

Post Office: Union State: Ill Zip Code: 60180

COLLECTOR: Fill in shaded area only. Type or use black ball point pen. See reverse side for explanations and instructions.

This Agency is authorized to require this information under Ill. Rev. Stat., 1979, Chapter 111-1/2, Section 1019. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $10,000.00 and an additional civil penalty up to $1,000.00 for each day the failure continues, a fine up to $1,000.00 and imprisonment up to one year. This form has been approved by the forms Management Center.

Samples scheduled during: Special Test

Received by: K. Patel

Date and time in Laboratory: OCT. 28. 1985 3:30 PM

5. Date and time collected: 10/28/85 10:15 AM

6. Sample Collector: T. LEAD

7. Telephone Number:

8. Sample Type:

☐ Distribution: Sampling point address or building: River

☐ Raw-Well # ____ : Depth: ____ Year Drilled: ____

Pumping rate: ____ gpm Hours pumped: ____

☐ Raw-Surface: Inlet depth ____ ft.

Source: ____

Parameter	Reported As	MAC mg/l*	Concentration mg/l*
Ammonium	N		0.05
Potassium	K		
Iron	Fe	1.0	0.50
Manganese	Mn	0.15	0.06
Calcium	Ca		112
Magnesium	Mg		46
Sodium	Na		20
Barium	Ba	1.	
Beryllium	Be		
Boron	B		
Cadmium	Cd	0.010	
Chromium (Total)	Cr	0.05	
Cobalt	Co		
Copper	Cu	5.	
Nickel	Ni		
Silver	Ag	0.05	
Strontium	Sr		
Vanadium	V		
Zinc	Zn	5.	

Parameter	Reported As	MAC mg/l*	Concentration mg/l*
Fluoride	F	1.8**	
Chloride	Cl		40
Nitrate + Nitrite	N	10	
Sulfate	SO_4		99
Alkalinity (pH 4.5)	$CaCO_3$		308
Specific Conductance @ 25°C	mmhos/cm		836
Total Dissolved Solids/EC	TDS		—
Filterable Residue @ 180°C	TDS		
pH	pH units		8.4
Hardness	$CaCO_3$		480
Cyanide	CN	0.2	
Soluble Silicates	SiO_2		
Arsenic	As	0.05	
Lead	Pb	0.05	
Mercury	Hg	2. µg/l	µg/l
Selenium	Se	0.01	

Unless Otherwise Indicated

** For those counties of the State North of and including Henderson, McDonough, Fulton, Tazewell, McLean, Ford and Iroquois the MAC is 2.0 mg/l.

-Laboratory Use Only-

Laboratory Number: C508570

Date Forwarded: NOV. 21. 1985 By: JWD